

ABSTRACT

The present invention includes an apparatus for generating an inorganic polymer electret in a colloidal state, the inorganic electret in a colloidal state itself, and applications for the inorganic electret in a colloidal state. The invention includes a method for generation of a colloidal silica particle which is dipolar in that it is positively charged in the nucleus and negatively charged on the outer surface leaving a net negative charge to the particle. The apparatus includes the ability to control particle size, uniformity, consistency, hydration, and three dimensional structure which is desirable for various applications.